

Memorandum

Date: September 4, 1998

To: Policy Group

From: Roger Patterson
Regional Director, Mid-Pacific Region, U.S. Bureau of Reclamation

Subject: Partial Funding for the Madera Ranch Groundwater Banking Project

Summary

The CALFED Bay-Delta Program has identified expansion of south-of-Delta groundwater storage as one of 11 priority actions for 1998-99 that can be implemented under existing authorities. The Madera Ranch Groundwater Banking Project (Madera Ranch, or the Project) is specifically identified as one of the groundwater storage projects that can: (1) expand groundwater storage south-of-the Delta, (2) be implemented under existing authority, and (3) begin implementation in 1999.

This item is a request to use \$14.5 million of the funds previously allocated for water acquisition to assist in acquiring an environmental share of Madera Ranch to supply water for environmental purposes. The remaining cost of the project, estimated between \$75.5 million and \$110.5 million depending on financing rates and construction costs, would be funded by grants and loans obtained by the Trust for Public Land (TPL) and funds from urban and agricultural water users. Because some of the funds provided through TPL will be in the form of a loan, an additional environmental share of the project may be gained at a later date by using environmental funds to repay the loaned portion of the TPL funds. Storage space in, and water retrieved from the groundwater bank will be made available for environmental, urban and agricultural use based on the pro rata contributions to project costs from environmental, urban and agricultural funding sources. Such environmental storage benefit would be in addition to the project mitigation requirements.

Consideration of this expenditure is import at this time because of the fortuitous circumstances of available funds in the water acquisition program, willingness of the current owner to sell, timely availability of grants and loans through TPL, and the willingness of water users to participate financially. In addition, CALFED has identified south of Delta groundwater storage as a high priority action for 1998/1999. While it might be possible to wait until the 1999 funding cycle, the seller has informed Reclamation that other offers being considered.

*Madera Ranch
Groundwater Banking Project*

September 1998

Following is a general description of the project and its benefits. In addition, a list of commonly asked questions and their responses is provided (Attachment A) along with the information packet submitted to the Integration Panel (Attachment B). The information packet is a summary of the Phase 1 Report completed by the Bureau of Reclamation (Reclamation) in May 1998. The Phase 1 Report is a pre-feasibility level analysis of the Project's capability and suitability to meet groundwater storage requirements south-of-the-Delta.

General Description

Madera Ranch is located in Madera County north and west of Fresno, approximately 8 miles from the Mendota Pool. Reclamation and the San-Luis & Delta-Mendota Water Authority (SLDMWA) have been jointly negotiating the purchase of Madera Ranch with the intent of developing a groundwater banking project to provide water for environmental, urban and agricultural use. Madera Ranch comprises 13,600 acres of largely undeveloped upland habitat identified by the Fish and Wildlife Service as Priority 1 habitat for as many as 40 special status species and habitats including the Blunt Nosed-Leopard Lizard, Kangaroo Rat, Kit Fox and vernal pools. The land is boarded on all sides by agricultural land. Currently, approximately 2,000 acres are under cultivation, 1,000 acres are being used for grazing, and the remaining 10,600 acres are undeveloped. The geologic characteristics and location of the site make it suitable for development of a groundwater bank capable of providing additional water supplies for environmental, urban and agricultural use.

The total cost of the project is between \$90 and \$125 million depending on financing rates and actual construction costs. The cost of facilities necessary for the Project is estimated at \$60 million (spreading basins, groundwater extraction wells, and a conveyance pipeline to Mendota Pool). The SLDMWA has indicated that it would pay a portion of the costs for construction of facilities depending on the anticipated water supply benefits SLDMWA may receive. The SLDMWA has indicated that if the actual construction costs equal \$60 million then SLDMWA will consider paying the \$10 million premium to the owner. However, the premium will be reduced for each dollar the actual construction costs exceed \$60 million. Although negotiations are ongoing, the cost of land for the Project is estimated at \$40 million plus the additional \$10 million premium mentioned above, which may or may not be payable depending on the Project's actual construction costs. Initially, TPL would purchase the property with a mixture of grant and loan funds from other sources. TPL would transfer title to the SLDMWA and/or a to-be-created operating entity as funds become available to repay the loan.

The Project's environmental benefits are twofold. First, the Project will provide 390,000 acre-feet of groundwater storage and up to 70,000 acre-feet of yield, a portion of which will be used to meet environmental water demands. Environmental water available from the Project may be used in several ways. Water may be returned from the Project to Mendota Pool and then delivered to wildlife refuges south-of-the-Delta. Alternatively, water could be returned from the Project and released as instream flow in the San Joaquin River. Under this scenario water could be made available in the San Joaquin River to supplement flows provided by the

Vernalis Adaptive Management Plan or to meet other instream environmental needs. Water could also be returned to Mendota Pool and delivered to urban or agricultural contractors south-of-the-Delta in exchange for reduced pumping rates in the Delta. Finally, once the water is in storage it could be sold to urban or agricultural users and the money used for other environmental projects.

The second environmental benefit accrues from the land itself. The land is designated by the Fish and Wildlife Service as Priority 1 habitat that can be managed consistent with project operations to provide habitat for special status species. The investigation and analysis completed as part of the Phase 1 Report, and summarized in Attachment B indicates that groundwater banking facilities, including recharge basins, could be designed to minimize impacts to special status species and habitats.

While management of the land as habitat is exclusively an environmental benefit, the water available from the project will be allocated according to CALFED's beneficiary pays principle. Therefore, if total project costs are \$110 million for land and facilities, and SLDMWA pays \$60 million for facilities plus the \$10 million premium, then SLDMWA would receive 64 percent of the Project's storage capacity and yield $[(\$60 + \$10) / \$110 = 64 \text{ percent}]$. Similarly, if CALFED and other environmental sources pay \$40 million, then environmental uses will receive 36 percent of the storage capacity and yield $(\$40 / \$110 = 36 \text{ percent})$. Although negotiations are currently ongoing and changes may occur, funding is currently being sought from the following sources in the amounts listed.

| <u>Land</u> | | <u>Facilities</u> | |
|-------------|--------------|-------------------|--------------|
| TPL | \$8M Grant | SLDMWA | \$60M |
| TPL | \$17.5M Loan | SLDMWA Premium | \$10M |
| CALFED | \$14.5M | | |
| Total | <u>\$40M</u> | Total | <u>\$70M</u> |
| Grand Total | \$110M | | |

To ensure that the benefits of the Project are allocated according to the sources of funding used to construct the Project, it is necessary to develop operating principles that define how the amounts of water, timing, and operational flexibility allocated to environmental and agricultural uses will operate together. Reclamation and SLDMWA have not yet developed these operating principles. Rather, it is important that representatives of each funding source be included in developing the operating principles. Therefore, once the various sources of funding are identified, representatives from the environmental and agricultural agencies and/or communities will be asked to develop the operating principles.

Currently, one of the most serious issues regarding the Project is associated with concerns of the local community and landowners adjacent to the Project. Adjacent landowners are concerned that retrieval of water from the project will result in significant declines in their groundwater levels. These concerns are important and will be present in development of all groundwater banking programs. For this reason, successful implementation of the Madera Ranch Project should include input from local interests in developing the Project's operational principles.

Action

Reclamation requests that the CALFED Policy Group approve use of \$14.5 million of the funds allocated for water acquisition to acquire an environmental share of the Madera Ranch Groundwater Banking Project. If the Policy Group chooses not to use 1998 Water Acquisition funds, then Reclamation requests approval to use \$14.5 million of 1999 funds. Policy Group approval should be conditioned on receiving the advice of the Ecosystem Roundtable after presentation and discussion of the Project at the September 21, 1998, Ecosystem Roundtable meeting.